

WHAT IS CLAIMED IS:

1. A method comprising:
measuring force distribution information at a plurality of points on a substantially
continuous surface;
processing the force distribution information to identify events on the surface; and
5 mapping the events to pointing device behavior.
2. The method of claim 1 wherein processing the force distribution information
comprises calculating a center of pressure of a total force on the surface.
- 10 3. The method of claim 2 comprising:
detecting an increase in a sum of forces measured at each of the plurality of points;
determining that the increase in the sum of the forces is between a lower threshold
and an upper threshold; and
identifying that the surface is being touched, based on the increase in the sum of the
15 forces.
4. The method of claim 3 comprising:
detecting a decrease in the sum of the forces; and
identifying that the surface is no longer being touched, based on the decrease in the
20 sum of the forces.
5. The method of claim 2 comprising:
monitoring changes in the force distribution information at the plurality of points for
a period of time;
25 determining that a sum of the changes for the period of time is less than a threshold;
and
identifying that there is no interaction on the surface.
6. The method of claim 2 comprising:

monitoring changes in the force distribution information at the plurality of points for a period of time;

identifying a change in the center of pressure; and

mapping the change in the center of pressure to pointing device movement.

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7. The method of claim 2 comprising:

detecting an increase in a sum of forces measured at each of the plurality of points;

detecting a subsequent decrease in the sum of forces measured at each of the plurality of points; and

10 identifying a mouse click event, based on the increase and subsequent decrease in the sums of forces.

8. The method of claim 2 comprising:

measuring a pre-load force distribution on the surface; and

15 subtracting the pre-load force distribution from the force distribution information, prior to computing the center of pressure.

9. A system comprising:

20 a plurality of sensors operable to sense force distribution information at points on a substantially continuous surface; and

a pointer manager operable to map the force distribution information to pointing information.

25 10. The system of claim 9 further comprising a location determiner operable to determine a center of pressure of the force distribution.

11. The system of claim 9 wherein the surface is rectangular, and the plurality of sensors includes a sensor located at each corner of the rectangular surface.

30 12. The system of claim 11 further comprising an analog to digital converter that is operable to convert analog signals from the sensors to digital signals.

13. The system of claim 12 further comprising a communication device operable to communicate the digital signals to a computer.

14. The system of claim 13 wherein the communication device includes a RF transceiver.

15. The system of claim 13 wherein the computer includes a mouse emulator to translate the digital signal into mouse pointing events.

16. The system of claim 9 wherein the surface is a table.

17. The system of claim 9 further comprising:

a second set of sensors operable to sense force distribution information at points on a second substantially continuous surface;

a second pointer manager operable to map the force distribution information to pointing information; and

a computer including a mouse emulator operable to translate the force distribution information from the first and second surfaces into a stream of mouse pointing events.

18. An application comprising:

a code segment operable to measure force distribution information at a plurality of points on a substantially continuous surface;

a code segment operable to process the force distribution information to identify events on the surface; and

a code segment operable to map the events to pointing device behavior.

19. The application of claim 18 comprising:

a code segment operable to detect an increase in a sum of forces measured at each of the plurality of points;

a code segment operable to determine that the increase in the sum of the forces is between a lower threshold and an upper threshold; and

a code segment operable to identify that the surface is being touched, based on the increase in the sum of the forces.

20. The application of claim 18 comprising:

a code segment operable to monitor changes in the force distribution information at the plurality of points for a period of time;

5 a code segment operable to identify a change in a center of force of the object; and

a code segment operable to map the change in the center of force to pointing device movement.

21. The application of claim 18 comprising:

10 a code segment operable to detect an increase in a sum of forces measured at the plurality of points;

a code segment operable to detect a subsequent decrease in the sum of forces measured at the plurality of points; and

15 a code segment operable to identify a mouse click event, based on the increase and subsequent decrease in the sums of forces.

22. The application of claim 18 comprising:

a code segment operable to measure a pre-load force distribution on the surface; and

20 a code segment operable to subtract the pre-load force distribution from the force distribution information prior to computing a center of pressure.